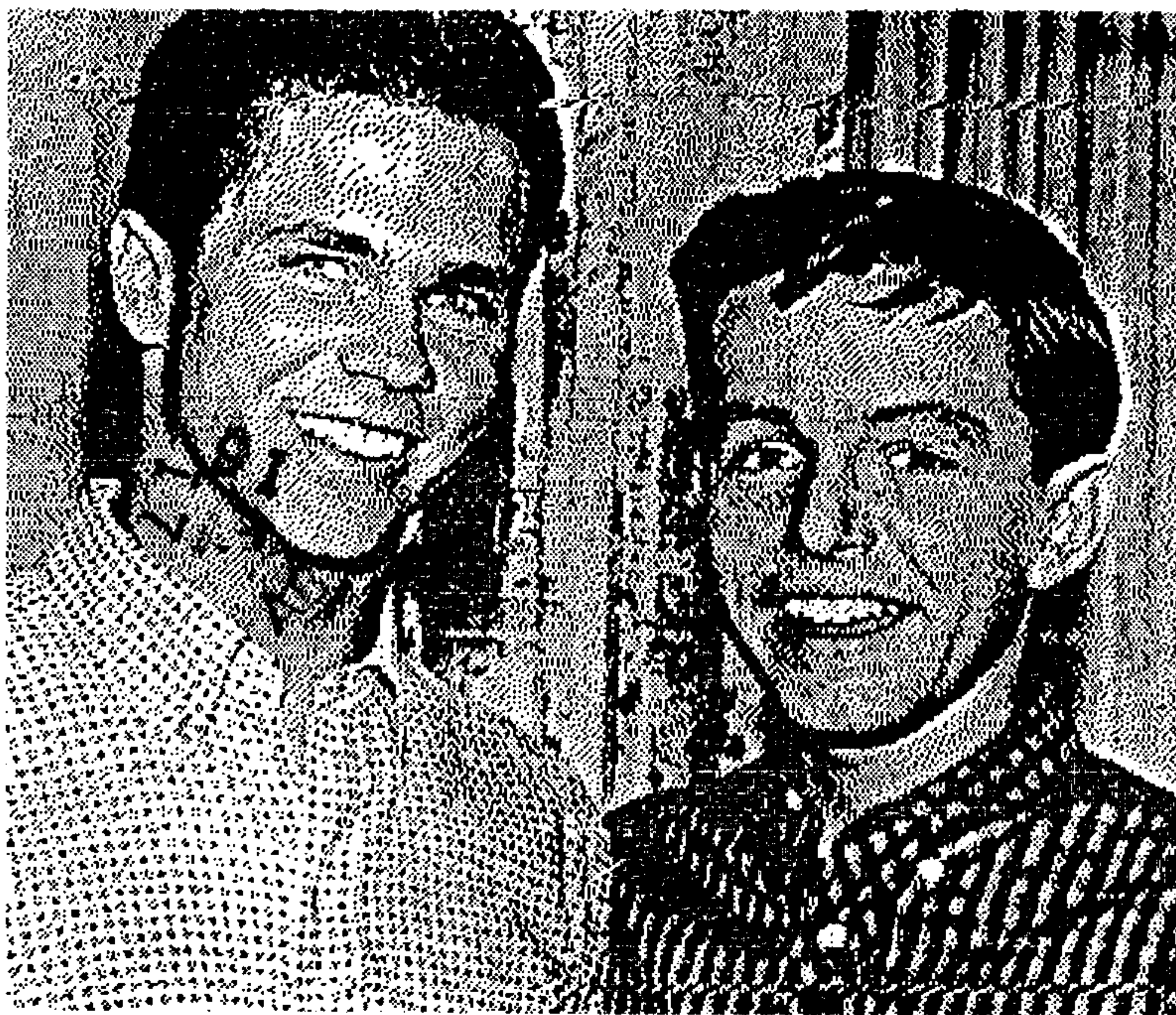


CHICAGO TIMES

NEWSLETTER OF THE CHICAGO TI-99/4A USERS GROUP

6TH ANNUAL FAIRE
NOV. 12, 1988

OCTOBER 1988
EDITOR Bob Demeter



Hey Beav, Did you know that Chicago was having their 6th TI Faire? Gee Wally, everybody will be there 11/12/88 from 9 to 6. These people started it all.

THE OCT. MEETING,

Sat. 10/1/88 from 1:00 pm to 3:00 pm in the Community Room at the Brick Yard Mall. 6401 W.Diversey, Chicago.

MEETING DIRECTIONS INSIDE
NEW UGBBS # 312 345-4136

NEW NUMBER FOR USER GROUP BBS.

(312) 345-4136

Along with this new number comes a new sysop and new BBS software. All members of the Chicago TI-user group will have access to the new bbs. In order to get on the new bbs your user number will now be membership number and your password will be the first 5 letter of your address.

EX. MY Membership #27 Address 1411 N.36th

I call the bbs at (312)345-4136
It asks me for my membership number
I enter 27
It then asks me for my password. I enter 1411 and a space
and I will log in.

NEXT YOU WILL SEE THE FOLLOWING MENU

UGBBS Main Menu

ulletin Section* Tell how to join the Chicago User Group
<C>hat with sysop.
<F>ile Transfer Section Up/downloading. (Xmodem TE2)
<G>oodbye (Hang up)
<N>ew Screen and Text color change automatically saves your
personal choice for future calls. (TE 2 only)
<O>ther CHICAGO TI BBS PHONE NUMBERS
<P>assword change
<M>essage base
<S>end private message to sysop
<T>ime on System
<U>ser log. gives a list of all UGBBS users and last called.
<?> any where on bbs shows help menu
<\$> inputed at any prompt means immediate Log off of bbs

end of menu screen

The above command are self-explanatory. Entering the letter in the bracket will get you the feature.

EX. Entering a M will bring you to the message base option.

The next thing you will see is the choice of msg. base.
Enter the corresponding numbers to get into that base.

0= return to main menu
1= general
2= for sale

3= email

Entering a 1 will put you in the general base.

Next the option for that base will come up.

The following letters may be entered.

<A> Abort scrolling and put you at a command line
<N> Next msg or skip a msg.
<T> Title only toggle. Hit it once and you will get title only. Hit it again and the msg will come on.
<S> Scroll toggle. Hit it once the msg will scroll. Hit it again it will stop.
<D> Delete your msg.
<R> Reverse msg. Toggle direction of msg. Hit it once you will read the msg base from high to low. Hit it again you will read it from low to high.
<M> Main Menu. Bring you back to the Main menu.
<L> Leave a msg in the base you entered.
<J> Jump Don Jones Msg (not yet implemented). Will skip all the msg that Don Jones left.

Those are the msg base commands. The only one that needs a little more explaining is L for leave msg.

The leave msg option will allow you to leave a msg in the current base you are in, it will allow you to leave email to the person in the msg you just read or email to another person.

EX. Let say I am in the for sale section. I just read a msg that a printer was for sale. I hit L, it then ask me if I want to leave email.

Entering a N will let me leave a msg for all user to see in that msg base.

Entering a Y will then give me another prompt asking me if I want to leave the author of that msg a private mail or if I want to leave a email to someone else.

Entering a Y will leave the email to that person. Entering a N will allow you to leave a email to someone else.

NOTICE: you do not have to be in the email base to leave a email to any user. JUST HIT L IN ANY BASE THEN Y FOR EMAIL. THIS WILL GET YOU THE USER OF THE LAST MSG READ IF YOU DONT WANT TO LEAVE HIM A EMAIL HIT N. FIND THE USER NUMBER YOU WANT TO LEAVE THE EMAIL TO. ENTER 1 TO CONTINUE AND LEAVE HIS NUMBER AT THE TO PROMPT.

I am looking to run a reliable user group bbs. If you notice any errors leave me a msg on that bbs or my bbs at 345-4127

NOTICE All member that have paid \$1.00 for a lifetime membership of the bbs but are not a member of the group, contact me on my bbs at 345-4127 and I will get you a new user number and password.

Nick Iacovelli Jr. (SysOp) Ti-West 345-4127 UGBBS 345-4136

From the Welcome Matt...

What! Hold a meeting on Labor Day Week-end!

You say you are going to hold it in the Community Room at the Brickyard where noone can find it?

And, you're going to hold it when many people are still on vacation!!

You've got to be Nuts!!

Yes, the Chicago Users Group held their meeting the day before Labor Day and What Do You Know... We had over 75 people in attendance. It was a great turn-out. Mr Birdwell is even back!! Yes Sirree!! The vendors, the "Head Table" and the members (and 5 wonderful guest) took up just about the whole room. It won't be long and we will have to hold the meeting upsairs in the Mall.

We had one new member join us and nine people renewed their membership for 1989. For those of you that are still not "squared away" with 1988, please hang on... We are getting the back issues, etc. to you as soon as possible.

Because of my work load, I am going to have to step down from this position. I have had my duties almost doubled this School Year, so I can not possibly keep up with the work needed to make this job flow properly. James Brooks is now your new Membership Chairman and I am sure he will do a fine job. I will help in any way I can, though. Good Luck, Mr. Brooks....

COMMUNICATIONS

Now that most of all the summer activity is just about come to a end, we should be able to get back to normal. At our last User Group meeting John Birdwell has put on a very nice Demo of the HFDC. From what we have seen, it now looks like we have hard drives for our 9640s and the TIs. I have not heard of anyone using the HFDC on the 99/4A as of yet but I am looking forward to seeing it done. For myself I only own a 4A and am very interested in seeing how it will work out on it.

We have seen some new people take over some of the jobs that our group must get done. Carole Goldstein has given her job of Newsletter Editor to Bob Demeter. Butch Goldstein has given his job of BBS Sysop to Nick Iacovelli. Matt Mullen has given his job of Membership Chairman to James Brooks. Carole Goldstein has been our Newsletter Editor of the past 5 years. She started out on it and it was just a sheet of paper or 2 and has turned it into great and informative magazine. Bob will have his work cut out for him trying to keep up the standard that has been presented in the past. We all wish Carole the best in what ever she ventures into and thank her for the effort that has made the Newsletter what it is today.

Butch Goldstein has been our BBS sysop for the past 3 or 4 years and has taken a old BBS and put it aside and for a nice TI-West system. After numerous updates to the West system, our User Group BBS was one of the busiest BBS in the country. At times I would have to use a dialer just to get into the board. Butch has put the effort forth and has done our community a great service, without his effort the information would not have been there. Thanks to Butch we have seen many years of the Chgo TI User Group BBS.

We have a new BBS on line at (312)345 4136. It supports the TI and the 9640 and we have big hopes of running it on a 9640 with a hard drive. At this time, it runs on a 99/4A and is running the TI-West software that was donated to the User Group by Nick Iacovelli, the author of the system. Also Nick Iacovelli is the sysop of this BBS. So from what it looks like to me, the author of the system is sysop of our BBS and has big hopes of running a 9640, we should have winning combination and are looking for a reliable board. The Chgo TI User Group no longer supports the (312)966 2342 number and we encourage you to call the new number, (312)345 4136.

At this time our User Group is 521 members strong and are looking for all those users that have there TIs in the closet to join us. There is all kinds of information to be had, all we need is your support. Tell us what you would like to see in means of software or hardware. The Texas Instruments 99/4A still lives and we are looking forward to the next generation, the Myarc 9640. If you support us, we will support you all the way.

TI-FAIRE

NOVEMBER 12, 1988

HELD AT:

Holiday Inn
3505 Algonquin Rd.
Rolling Meadows, Il
(312-259-5000)

PRODUCED BY:

Chicago Area TI-99/4a Users' Group
P. O. Box 578341
Chicago, Il. 60657
Marcy Brun, Faire Manager,
(Hot Line # 312/695/9291)

SOCIAL MIXER:

Friday, November 11, 1988
8:00pm - 12:00pm
admission - \$4.00

FAIRE HOURS:

Saturday, November 12, 1988
9:00am - 6:00pm
admission - \$4.00 (Chicago area TI-99/4a Users Group members
and children under 12 are free)

DINNER:

Saturday, November 12, 1988
7:00pm - 9:30pm
admission - \$10.00

HOTEL ROOM RATE:

\$55.00 - single
\$55.00 - double
\$65.00 - tower

LIMOUSINE SERVICE:

free to and from O'hare Airport and hotel

HELD IN CONJUNCTION WITH:

The Milwaukee TI-Faire
November 13, 1988 / 9:00am - 5:00pm
Quality Inn
5311 S. Howell Ave.
Milwaukee, Wisc.
(across from Mitchell Field Airport)

PRODUCED BY:

The Milwaukee Area 99/4a Users' Group
Mr. Gene Hitz (414/535-0133)
4122 N. Glenway

Wauwatosa, Wisc. 53222

-also-

The Wisconsin 99er Computer Council
P. O. Box 2723
Appleton, Wisc. 54911

I hope everyone is back in the swing of things now that summer is over and the heat is off.

The 1988 TI Faire/Convention is shaping up. More vendors are calling in to exhibit now that the time is getting near. Just think, it's only two months away.

Talk about the Faire shaping up, now we have to start getting down to the nitty gritty. As you can recall from previous Faires, we ask our members to donate their computer systems for the exhibitors to rent. This way the exhibitors that come from out of town don't have to ship so much equipment. This also gives you a chance to help with the Faire and receive next year's membership free. Doesn't that sound like a good deal? Well, it is. So I am asking all of you right now to start pitching in and call the new 1988 TI Faire/Convention Hot Line (312-695-9291) and tell us what equipment you will be donating to the Faire for use by the exhibitors. Or you could leave a message for Mark Harms, our "Equipment Collector", on both our bulletin boards. The numbers are: 312-345-4136 and 312-345-4127 (NEW NUMBERS). A few of the special pieces of equipment that we know we need so far are: two monitors with hyresolution; fully equiped PE Boxes; a Monochrome Composite or Analos RGB monitor; a modem; a Star/Gemini priner; an entire Geneve system.

So don't hesitate until the last week or so. Call in now to let us know what equipment you would be able to donate.

As I mentioned before, more vendors have called in to exhibit. Here is the fast growing list of exhibitors as of September 15th:

- ASGARD SOFTWARE -- new software by Charles Earl, Travis Watfort, Jam Reiss, Ed Johnson and Chriss Bobbitt.

- B&D COMPUTER SUPPLIES -- computer supplies.

- BUD MILLS SERVICES -- Horizon Ram Disc and P-Gram Card.

- C&G DRIVES -- disk drives, power supplies.

- CHICAGO AREA TI-99/4A USERS' GROUP -- Club's library, membership information, T-shirts, pencils, Times back issues.

- CHICAGO B128 USERS GROUP -- discs, data cases, supplies, etc.

- COMPETITION COMPUTER -- TI and printers.
- DATA SYSTEMS -- TI software.
- GENIAL COMPUTERWARE -- products for the TI.
- GENIE -- telecommunications service.
- GREAT LAKES SOFTWARE -- Joy Paint '99, Joy Paint's Pal Certificate '99, Certificate Companion, & at least one new release.
- HUNTER ELECTRONICS -- hardware, software.
- L.L.CONNER ENTERPRISE -- hardware, software, cables, chips, grom, ram.
- MYARC, Inc. -- hard and floppy disc controller for 4a and 9640, also new products
- NATIONAL MYARC USERS GROUP -- membership information, newsletters
- OTTAWA USERS GROUP -- J.P. Graphics, the new version of DM 1000, Charles Earl, author of Telco,
- RAVE 99 CO. -- keyboard, speech adapter cards, memory expansion cards.
- TI USER GROUP OF WILL COUNTY -- membership information.

As of September 15th, we only have 22 booths left open. So if you would like to exhibit or know of a company that should exhibit, call the Faire Hot Line (312-695-9291) to reserve a space.

At the last meeting, in August, we recruited more people to help produce this year's faire. I would like to thank all of you for stepping forward:

- Attendee Advertising and Promotion -- Mike Chappell
- Printing -- Roger Helm
- Equipment Collection -- Mark Harms
- Social Mixer Tickets & Reception -- Sandy Bartels, Dave Wakely
- Hospitality Room -- Mr. & Mrs. Hal Shanafield
- Faire Move-In -- Tim Fass, James Brooks, Norris Romeo, Al Antonowiz, Matt Mullen
- Faire Move-out -- Tim Fass, Ken Knapp, Norris Romeo
- Announcements -- Jon Bartels, Butch Goldstein
- Group Sales (T-shirts, pencils, etc) -- Sam Pincus
- Membership Table -- Irv Levinson, Ken Knapp, Matt Mullen
- Out-of-Town Travelers Information -- Grant Schmalgemeier
- Audio/Visual set-up -- Bob Demeter

- Exhibitor's Representative -- Paul Farber, Sandy Bartels
- Bulletin Board Systems Information -- Bob Demeter, Alan Izzo
- Back Issues Table -- The Shanafield family
- Driveway for Trailers -- Oscar Bretana
- Speakers and Seminar Coordinator -- Don Jones - Dinner Reception -- Christine Chambers
- Faire Entrance Table -- Al Antonowitz

You may notice a new listing of "Driveways for Trailers". Some of our exhibitors and attendees like to drive in from other states. Not everyone can afford to stay at the hotel, so they bring their pop-up campers or mobile trailers. If you live in the area of the hotel or the West end of Chicago and own your own home, you may like to think of letting someone park in your driveway and hook up to your electric and water. I'm sure you will have a good time meeting out-of-town TI'ers and hacking on the computer with them. Let us know on the Faire Hot Line if you would like to do this.

Don't forget, the people you see up on this voluntee list would like to see the faire also, so consider volunteering also. If we get enough people to help with each thing, you would only have to spend an hour of your time. Even if you only want to volunteer an hour or two, let us know so we can give people some relief.

It was brought to my attention that the Chicago Area TI-99/4a Users Group members get into the faire for free. What a bargain! However, since we have to hold the faire at a hotel this year because Triton College is being remodeled, we have more expenses to produce this year's faire. So even if you get in for free, we will be willing to take any donations you would like to make at the door. Just keep this in mind.

The seminar schedule is shaping up, too. So far we have:

- IRWIN HOTT presenting "How The TI Is Used By A Blind Person"
- CHRIS BOBBITT will be giving demonstrations of new programs that are coming out just in time for our faire.
- JACK RILEY presenting "Advanced Basic 9640"
- BARB WIEDERHOLD presenting "Video Flex"

If you have a special topic you would like to see a demonstration or seminar on just give us a call on the Faire Hot Line or leave a message for Don Jones on the bulletin boards. We would like to know what you want.

Well, pretty soon this year's Faire will be a "wrap". I'm

sure you would not want to miss it. It's going to be a great one and maybe the best one. So if you would like to get your tickets early, just fill out the form below and send it in with your check made out to the "Chicago Area TI-99/4a Users Group."

Marcy Brun, Faire Manager
Chicago TI Users' Group
P.O. Box 578341
Chicago, IL 60657

Please send me the following regarding the 1988 TI FAIRE/CONVENTION:

- () Exhibitor Information
- () Hotel Reservation Form

Please send me tickets for the following:

- (how many)
- _____ Social Mixer (\$4.00 each)
 - _____ Dinner (\$10.00 each)
 - _____ Faire (\$4.00 each) Children under 12 and Chicago Area TI99/4A User Group members free
 - _____ Kids Night Out (pay at time of event)

NAME _____

ADDRESS _____

CITY, STATE, ZIP _____

PHONE # _____



By Oscar Gretana

There are superstars pieces of software for every machine, this "masterpieces" are what have kept different machines alive, and the lack of them has killed others. For IBM, there is a LOTUS and a DBASE, for APPLEII there is an APPLEWORKS. Others were not that lucky, APPLE III died due to lack of software, well, we are very lucky, there has been more than one "Superstar" in the TI arena, however, none made it to the top in the Data base category, until PR Base, but the wait was well worth for.

Manipulation, sorting and reporting data in any number of ways, is what computers are better at. Actually it is one of the few things in which they are better than human beings. Data bases (organized collection of data), is a need of almost everyone, individuals, business, or organizations. Wether is a list of friends and relatives, with their respectives names and addresses, or a complicated Inventory system with hundreds of part descriptions and numbers, all benefit from the existence of Databases and (or) file managers).

There has been a steady, if not growing, interest shown by TI'ers in data bases since PR Base first showed up. This article, which I hope to continue for several issues, will try to tutor, the readers and the writer, in the use of PR Base. Before we get into the "meat" of the subject, I would like to scratch a little on terminology and nature of data bases. For those who know these subjects by heart, please just skip a few paragraphs, (maybe the whole article!).

I already threw a couple of terms, which you may have wondered about, Databases and File managers.

Different programmers and software companies give different meanings to their products, but the general criteria, is to diferenciarte all Data base products in two main categories; Relational Databases, and Flat File managers. Lets picture, for example, the list of members of the CTIUG. We'll probably see a listing with names, last names, addresses, cities, zip codes, phone#'s , and member#'s. A piece of software needed to manipulate this information in order to sort it in different ways, and to obtain different reports from it, including perhaps tabular listings and mailing labels, will probably be a flat file manager.

Flat file managers work with one file at a time, that is their main characteristic, (and limitation). Relational databases, however, can work with a number of different files at the same time, extracting selected information from each one of them and presenting it to the user in the form of reports etc. One example of a relational database application could be, an inventory and sales tracking system, which may have a parts file, a customer file, and a salesmen file. With a relational database system like that, it would be possible to set up a report which would list each salesman, the number of units of different parts sold, the unit cost of each part, and the total dollars sold.

Well, by now you probably guessed that under this criteria, PR Base is a flat file Manager. Is that bad??? Maybe, then maybe not!!.

There is a place in this world for all creatures, including Relational Databases and Flat file managers. There are advantages and disadvantages to each. Really what decides which is better for you, are your needs and of course, the taste and capabilities of each user.

Relational databases are of course more powerful, but all come at a cost. Usually these are bigger, more expensive programs and above all, more complex to use than file managers. If you can do with a file manager, stay away from a complex database. Keep IT SIMPLE!!!.

With that out of the way, we are going to concentrate in our subject, file managers, and specifically PR Base.

PR Base works with one file at a time. A file is the total collection of your data, (ie), the CTIUG membership list. Files sometimes are called tables. I like the name of File. Files are made out of records, (ie), the part of a file that contains my name, last name, address, city, phone# etc., is one record. Records at the same time contain fields, some call them categories, columns etc., we will call them fields. Using again the same example, we looked at a record that contained the information of one member, well, under this record, the NAME is one field, LAST NAME another, etc.

Learning by doing is probably one of the most effective ways to master some subjects, and this is one of them. My advise, if you wish to profit from the reading of this article, is to set up your database as we go along. For this tutorial, I am using Mike Dodd's version of PR Base, This version is supposed to work on the Geneve and the TI. If you do not own PR Base, it is available on Bulleting boards, the CTIUG library and probably on all groups libraries. Remember to send your contribution to the author!!. He did a great job.

PLANNING YOUR DATABASE:

The first step in setting up your database, and a very important one, is the planning of it. You know what you want to achieve, well, take a few minutes, a pencil and paper. List the data elements, (fields), that you want your database to contain. Do not be stingy!!, even allow for an extra field, name it Extra, Bogus, or whatever, this is jut a list in a piece of paper, we can always erase.

In the process of planning your database, you must take into consideration some of the capabilities and limitations of PR Base. Lets enumerate some that you should always keep in mind at this time.

1-For single sided drives, a total of 310 records, 720 for double sided drives. (this is the maximum number of records per database).

2-Thirty two fields per records maximum.

3-Two hundred fifty five characters per records. These characters are set up in any combination of characters per field.

4-Each record will show up in one screen.

5-No number crunching at all.

6-Very fast sorts, based in a ten character field or combination of contiguous fields.

Once you made your listing of fields, roughly calculate the maximum lenght of each field, and the aggregate total of all of them. Compare the results with the above mentioned limits, if close or under these limits, then you may use PR Base with probable good results, if your totals are over these limits, you should make some adjustments to your requirements.

Now you are ready for the great moment.!!. Lets boot PR Base, we are going to use the "Create" program.

There is an Extended basic loader in the PR Base diskette, use it, and choose the "Create" option.

Once the "Create" program is loaded, you will select option #1. If you have two disk drives select drive 2, if one then select drive 1.

Now place a blank diskette in the selected drive, and select option #2 to format a blank diskette. Respond to the prompts according to you system configuration, is pretty much self explanatory. Once all the prompts have been filled with the

right parameters and you press 'enter' the system will initialize the diskette. A counter will flip verifying every sector. Once the counter stops, the diskette is ready for use, only as a PR Base data diskette.

DESIGNING THE SCREEN:

Select Option #3 from the main menu, "DESIGN DATA SCREEN", this will take you into the screen editor. You will see numbers on top of the screen and some graphic characters on the lower end. The numbers are to help you determine the length of fields as you set them up. The graphic characters may be activated by pressing 'control' and the corresponding key, these are used to create custom headings or borders.

Now you may type some title for this screen. The edit keys are all active. Now you may start to place the fields. Keep in mind that the field names which you assign will be the column headings in tabular reports. It is highly advisable that the first field that you place in this form is the one that will be used more often in sorts. PR Base builds an Index automatically, every time it reads a Data disk upon booting on the first field, so you may use instead of waste this time. Now, once you decided which field will be the first one, you should place the markers for the data. There are two symbols used as markers, [] and {}. The square brackets, are used to mask the use of capitals only, this is, if you use square brackets, everything typed in this field, will be accepted as capitals, even if you use lower caps. The braces, will allow for use of Caps, and small caps. If one of the fields is too long to fit in one line, just continue in the next line.

Continue with this procedure until you are completely done with your screen. Now take a look at it, you may change anything you don't like. If after the screen is done, you come up with a change, the editor will allow you to, however, try to do all changes to the physical location of fields, before you enter any data. The editor will always allow changes, however, data may look garbled in reports if all records do not have the same physical layout.

Once you are done, press "Proceed", you will be prompted for a database name, name your database and REMEMBER this name, you will be asked for it everytime you boot it. Next you will be prompted for an output device, enter your printer's name. Two copies of your screen will be output to the printer. One looks just like your screen, the other is filled with "+" in all the blanks, this is to help you in determining the screen location of data. Keep this printouts, you will need them later when you design reports.

Now you are done with your screen design, press "Proceed", when prompted, and the screen layout parameters and database

name will be written to disk in sectors 0 to 9, (remember this, it will be useful in the future.)

Now just one more step for this first tutorial. With your data disk in the corresponding drive, boot PR Base again, and select Create. From the Create main screen, you are going to select the default colors of your screens. You do this from the "Create" menu by pressing "F" repeatedly until you get the right foreground color, and "B", until you get the desired background color. Once you have the right combination, press space bar to continue, select "Select Data Drive", and then select "DESIGN DATA SCREEN". Now PR Base will read and display your screen with the color combination you selected. Repeat the procedure as before. Once this screen is saved into your data disk, the selected colors will display every time you boot. NEAT!.

Well this is enough for now, Next time we will go into entering, editing and manipulating data, and creating a simple tabular report.

PR Base has very good documentation, take the time and read it, this tutorial can't cover all the fine points. Do not be afraid, experiment, try different options, you may goof, but you will learn.

See You!!!

Library Shelf

— Bob Deneter —

What's in the library? Do we still have one? Do we have any new disks? Is there a new library listing? Many many questions. I'll try to tell you all about them. I guess you noticed this article didn't make the Summer issue. I had it half done and missed the deadline. 4 days before deadline, my present wife became ill. She was hospitalized. Hypertension I guess. Anyway, while in the hospital, she gave birth to my 3rd daughter. This kept dear ole dad's butt a little busy. Playing Mr. Mom for 4 days was fun but didn't allow any time for computing. The only nice this is my article is half done. I'll just have to cut out all the nice things I said about Don Jones. Don was the only one that got his article done by the Aug. 1st deadline. I praised him for it. You should have read it, Don. Then again, maybe it's better you didn't. Your wife would have had a big job sewing your buttons back on. And you, you would have had to buy a bigger hat. Thanks for caring so much about the group though.

Q: What's in the library?

A: A ton of stuff. We have over 200 disks of Public Domain, Fairware and 9640 software.

Q: Do we still have a library?

A: See answer above.

Q: Do we have any new disks?

A: I download many programs every week. Others are donated by thoughtful members. My only trouble is finding time to review them all. Q: Is there a new library listing?

A: We are working on it. We are adding 70-100 disks of Public Domain, Fairware and 9640 software. It takes time to check everything out and categorize it. It's been a busy summer for the librarians. With work, family and vacations, things didn't move all that fast. I hope to have the listing by October. Just in time for the Faire. That is taking some of our time too. We've already started making disks for the faire. With almost 300 disks in the library, we'll have to make about 4,000 disks for the Faire. Lots of copying to be done.

Since I'm behind in reviews, I have a plan. Last month I reviewed TELCO and DSKU. Those are the ones that didn't make the Summer issue. This article will review them. To get you up to date with everything we have, I'll do very short reviews on everything else. When I get caught up, I'll go back and do a better review. I know I'm down at least 10 to 15 Fairware programs to review. To do that, I'd have to have my own newsletter. Even Micropendium only reviews 2 pieces of software a month. If we threw in Feed Back, Comments from Readers and Ads, we'd make 40 pages every month too. Just hang in there. We'll get all caught up.

By the way, Bill Hughes has come up with a great idea. He made a sign using a commercial program. On this sign he had names and descriptions of new software in the library. This was hung out at the meeting. This gave people a chance to see what else we had to offer. There's a 2 to 3 week lapse between writing this article and the meeting. We sometimes get 3 or 4 programs in after this goes to press. The sign tells what we've added between press time and the meeting. Then the following month's article will review the newer software for our non-attending members. Good idea, Bill.

Let me also take this time to thank him and Tom Niemczyk for all the help they've given me over the past year. These are the 2 guys that make all the disks for the meetings and fill all the disk based library orders. Thanks guys. You're tops with me.

I also want to thank Ernie Pergrem, Mario Garza, George and Carol Scherer and George Lempeotis for volunteering to help the library at the faire. One other person approached me at the meeting and volunteered. I forgot your name. Please set me straight in Oct. You people don't know how grateful I am to you. It's great to see new faces volunteering to help. I know you'll have a great time.

We still need more volunteers. To make it really easy on everyone, I could use at least 20 people. This way everyone will get a break and a chance to see the Faire. I know if it

weren't for the video tapes, I wouldn't have never known what happened at the seminars. Please volunteer so we can all enjoy ourselves this year.

Enough Babbling. On with the show. Here are 2 program reviews intended for the Summer issue.

TELCO 2.1 anyone? This by far is the hottest and sexiest terminal program for the TI and 9640 I've seen. It has all the features of term programs written for the BIG computers. 2.1 features: A nice PC Pursuit dialer, YMODEM xfers, QUIK B xfers for Compuserve and much much more.

Charles Earl has got to be a TI programmer with an IBM owner's brain. His TELCO program has every feature I've seen on elaborate programs like PROCOMM and QMODEM. His documentation is well written too. I've only found 2 mistakes in it. #1, do NOT look for a LOAD program on the disk. It's NOT provided. #2, do NOT look for a 3rd documentation file, TELCOD3. It's not there either. That doesn't mean they don't exist. Some Fairware authors choose not to give you everything on the free release disk. Just as some of the docs are missing from CFS and no docs with DSKU, Charles may be doing the same. Usually when the author is compensated properly, you'll receive a disk with all the available files on it. Getting back to the program, there aren't too many things it won't do. The AUTO DIALER will keep 99 numbers close at hand. This is provided you have a Hayes compatible modem. There is also a PC Pursuit dialer. User defined macros are provided. You are allowed the use of 26 macros. Each may use up to 36 characters. You may also tie a string of macros together. Just read the docs and learn how to use the command. It's really quite simple. Before I get too carried away, let me explain something. You pros may get bored, but, this is for the new guys. Some of you may not understand what a macro is. To put it very simply, it could be a set of characters you type numerous times. Like your user name, # or password. Maybe when you leave messages on a BBS you start it or end it with the same sentence. Now you can avoid typing these all the time. Just send a macro. If you normally log onto a BBS and there is a 4 second delay between the time it asks your User # and Password, do this: 1- Most modems will send a delay and carriage return, find out yours. 2- Make a macro with your name and password. Example- Say your modem accepts an exclamation point as a carriage return and a tilde (~) as 1 sec. delay. Or a comma as a 2 sec. delay. Make you macro. Username!Password or Username!~,Password! Either one will send your Username and a CR. It will delay 4 sec. then send your Password and CR. (CR stands for Carriage Return). As you can see, pressing FCTN-M and the Macro letter is a lot quicker then typing this info all the time.

There are a host of things you can do with TELCO. I mentioned the auto dialer earlier. As stated it will store 99 numbers. But, when auto dialing, you can select up to 15 entries to redial. Very simply, you enter the entry number

of the BBS's you want to call. TELCO will go thru the list calling each number till it makes a connect. The terminal mode has a Status Line at the bottom. This will give you a timer clock. Make you aware of the modem set up you are in. This includes Baud, Data Bits, Stop Bits, Parity and Duplex. It also informs you of the status of your Auto-logger and Print Spooler. The last 3 items on the Status Line are Remote Echo status, Window Status and where you are in the program. I find this status line very helpful. One can see at a glance just what's going on. A Help Screen is just a key press away. FCTN-7 will always get you there. Although I've had limited use with TELCO, it can emulate various terminal modes. It will work as ANSI, ADM3A, D410, HP2392, VT52 VT100. I usually kept mine in ADM3A and it worked fine. From the Main Menu of TELCO, you can select a Setup mode. This will allow you to setup TELCO with all your options and save it. That way it will be just the way you like it every time you fire it up. You can set up your terminal mode. Adjust the screen width, the emulator, line wrap, screen schroll, duplex, parity, baud, log mode spooler mode and more. Screen Setup lets you set foreground and background colors, 40/80 column display, inverse menu, sound effects and more. Hardware Setup lets you adjust spooler port, baud, parity, modem port, etc. You can set various things for file transfers in that setup mode. In the Modem Setup mode you tell TELCO the characters your modem will accept for CR, Pause, Escape, etc. Once you have set TELCO the way you like it, save it. That's what you get the next time you power it up. With the Auto Dialer entries, you set up the modem for each individual BBS you call. If one BBS runs at 300 baud BN1 you set it up. Another runs at 2400 7E1, set TELCO to do it. Every time you select that entry to call, that's what you get. TELCO even has a Auto Log feature. You can capture all characters that scroll across your screen. They'll all go into a buffer. The buffer dumps to an assigned device. All info is appended so nothing is overwritten. If a Auto Log file gets too big, TELCO creates another. TELCO even has a Catalog feature. Once a disk has been cataloged, you have the option to delete, protect, unprotect or view files. As far as improvements go, I can't think of any. When TI BBS's start using YModem more or come out with YModem Batch or ZModem, it would be nice to see on TELCO. Otherwise, as stated earlier, we're in the Big Leagues with TELCO 2.1. The 2 disk set is just \$3.00. And don't forget your donation to Charles.

How about our own John Birdwell? It's obvious John's been a busy man. He's been working with Myarc getting the Hard Floppy Disk Controller working. I understand he's been very instrumental in many of the latest production software available. He's now the newest columnist for Micropendium and still author of the acclaimed DSKU program. John will soon be an attending member again. I hope he'll enlighten and entertain us from time to time at the meetings.

OK, DSKU is now in version 4.12 and the number of things it can do is awesome. This program is becoming a Total Package program. It's a Disk and File Manager, a Sector Editor and a File Reader. That's 3 of the things I find myself doing every day.

Let's take a look at some of DSKU's features. The main menu let's you choose File Utilities, Disk Manager, Disk Utilities, Sector Utilities, Setup, Exit or Load FW. We'll step thru the catagories to see what each has to offer. File Utilities will let you work on individual files. Choices are: 1- File Ops. 2- File Recover. 3- File Report. 4- File Editor. 5- Find String. 6- File Compare. 7- File Print. File Ops will provide a catalog. You are then given options as to what to do with each file. You can Copy, Delete, Move, Edit, View, Rename or Unprotect. The View feature is very nifty. You can view any Display Fixed or Variable file to screen or dump to printer. These files can be any Displayed length. DSKU doesn't care if they're D/V 80, 132, 63 or whatever. You name it and you got it. Recover File let's you recover a deleted file. That is if it is at all possible. Remember, a file that has been written over, CAN NOT be recovered. File Report will give you the file's name, lenght in sectors and bytes, type, FDR and start and ending sectors. If a comment file has been setup, it will be displayed too. By the way, a FDR is the File Descriptor Record. You'll recall from the BITMAPS article that this is the sector that contains all the info about a particular file. These are sectors hex 02 thru 21.

Disk Manager will allow you to initialize a disk. You also have to option to Copy in Bitmap or Backup fashion. The other options include Validate Disk, Rename Disk or Reset Disk. Validate disk will check for any bad sectors. This is non-destructive and can be done on any disk. You have the option to mark any bad sector as used. This way files will not try to write to them. Reset disk will let you make the disk look as if it had just been initialized.

Sector Utilities is a sector editor plus. You can edit sectors, search for and replace strings and compare sectors from one disk to another. Many many other features are included on this disk. It also runs on the 4A and 9640. There is included on the disk, a version that works on the Myarc disk cntroller. This is for those that do not use the 80 track EPROM. John has put in a lot of hard work to make this one of the best Utility disks around. Please don't forget to compensate him properly. Get it now for only \$2.00

By the way, those that missed the Sept. meeting, missed the demo of their life. John Birdwell brought his Myarc Hard Floppy Disk Controller. He also had his 9640 and a Rodime 10 Meg. hard drive. All 3 pieces were hooked into his P-Box and worked beautifully. We now have living proof that the HFDC exists and works as predicted. Thanks for a GREAT demo, John. For those of you that may not know, John is under contract with Myarc. I hope to see many fine Myarc programs

come out thanks to his efforts.

The following will be short reviews on software we've had for a while. This stuff has been in the library. But, without a review or listing, there was no way for you to know about it. Here goes.

TEXTLOADER	- Loads Text for you to read.	\$2.00
GBS	- Sector Editor program.	\$2.00
PLUS	- TIW helper. Many features.	\$2.00
MS-ADVENTURE	- 3 Adventure games. Self Contained.	\$2.00
GRAPHIC LABELER III	- Print labels with graphics.	\$2.00
EASY MUSIC	- Plays music. Very nice.	\$2.00
XB DM99	- Resident disk manager.	\$2.00
FUNLWEB 4.12	- Word Processor. Aug. 88 release.	\$2.00

JUST B.S. from POTTSMOUTH !

Like I said last time. "IT'S YOUR USER GROUP. USE IT !"

First thing I'd like to say is SORRY ! NO, I don't work for 99er magazine. I just screwed up. Left out a ")" in a good little program. It will NOT happen again. Here is the last one again, with out a error.

Type it in as is .

```

1 CALL CLEAR :: ! ZLARGEKEY
2 CALL SPRITE(#1,90,2,94,126)
3 CALL SPRITE(#2,91,2,108,126)
4 CALL SPRITE(#3,92,2,94,142)
5 CALL SPRITE(#4,93,2,108,142)
6 CALL MAGNIFY(2)
7 CALL JOYST(1,X,Y)
8 CALL MOTION(#1,-Y,X)
9 CALL MOTION(#2,-Y,X)
10 CALL MOTION(#3,-Y,X)
11 CALL MOTION(#4,-Y,X)
12 DEF D$(X)=CHR$(3*X+6.5*(X AND 2)+48)
13 DEF CD(X$)=ASC(X$)-55+7*(ASC(X$)AND 32)/32
14 F=0 :: R$="" :: INPUT "INPUT ONE KEY ":I$ :: IF R$=I$ THEN
14 :: CALL CHARPAT (ASC(I$),J$)
15 FOR I=1+F TO 16 STEP 2 :: M=CD(SEG$(J$,I,1))::
R$=R$&RPT$(D$((M AND 12)/4)&D$(M AND 3),2):: NEXT I :: IF F
THEN 16 :: F=1 :: GOTO 15
16 CALL CHAR(90,R$):: CALL CLEAR :: DISPLAY
AT(18,7):CHR$(90)&CHR$(92):: DISPLAY
AT(19,7):CHR$(91)&CHR$(93)
17 PRINT I$;"=CHR$(";ASC(I$);")":J$:"=":R$: : :: GOTO 7
18 REM -----

```

Just as before, I'll ask the question. YOU ANSWER IT! If you think you got the answer.

THE QUESTION :

Why when I enter a 1900 , I get a -1900 ?

AND . Why can't I read the memory location of -26626 ?

(You know this is just a sneaky way to get YOU to put in a program .) Shhhhh !

If you got a program. BETTER or WORSE ! Put it in ..

Now to try again .

THE PROGRAM ;

```

-----
100 CALL CLEAR :: RANDOMIZE :: DIM PG$(40):: PRINT " W O R S
T L O A D !:" can screw up a file ":" TRY -5800 " : : : : :
:
101 DISPLAY "DANGER OF LOCKUP on -26052 Z= START OVER
177=you pick # 178=EX-program loader space= NEXT part"
102 T=INT(RND536)-32768
103 PRINT I-T;
104 IF I-T=-26626 THEN 102
105 IF I-T<-26630 THEN 107 ELSE 106
106 IF I-T>-25000 THEN 107 ELSE 102
107 I=0
108 DISPLAY AT(3,3):I-T
109 CALL PEEK(I-T,A)
110 IF I-T=-26627 THEN 100
111 PRINT CHR$(A);
112 DISPLAY AT(8,1):I-T;A,CHR$(A)
113 I=I+1
114 CALL KEY(5,K,S):: IF K=178 THEN 235 :: IF K=177 THEN 117
:: IF K=90 THEN 116 :: IF S=-1 THEN 119
115 GOTO 108
116 CALL CLEAR :: GOTO 100
117 INPUT "?>T ":"T
118 GOTO 103
119 ON ERROR 120
120 CALL SCREEN(15):: PRINT "D=dump DV=80 to PIO":"P=CAT TO
PIO":"K=keymap":"Z= 90":"crt1&1=177":"crt1&2=178 and ect.":
:"fctn&J&space-bar WILL BREAK": : :: GOTO 12 3
121 CALL SCREEN(6):: CALL KEY(0,K,S):: IF S=0 THEN 121 ::
CALL SOUND(K*3,110+K*5,5):: PRINT K;CHR$(K);:: IF K=13 THEN
120
122 PRINT " enter=start" :: GOTO 121
123 PRINT "L=EX-PROG.LODER":"K#90=CLOSE FILE":"K#177=pass
print":"K#178=close end":"K#179=delete
file":"K#180=CATALOG":"M=MIRRIOR IMAGE RUN":
124 INPUT "FILE NAME (dv/80)":W$
125 IF W$="L" THEN 235
126 IF W$="K" THEN 121
127 IF W$="D" THEN 200
128 IF W$="P" THEN 171
129 IF W$="4" THEN 140 :: IF W$="M" THEN 213 :: INPUT " WHAT
DRIVE ?":WD$
130 OPEN #1:"DSK"&WD$&". "&W$,INPUT ,DISPLAY ,VARIABLE 80

```

```

131 CALL SCREEN(14):: LINPUT #1:A$ :: IF EOF(1)THEN 134
132 CALL KEY(0,K,S):: DISPLAY AT(24,1):K :: IF K=179 THEN 136
:: IF K=90 THEN 134 :: IF K=177 THEN 131 :: IF K=178 THEN
135 :: IF K=179 THEN 136
133 IF K=80 THEN 170 :: IF K=75 THEN 121 :: IF K=180 THEN 139
:: IF S=-1 THEN 132 :: PRINT A$ :: GOTO 131
134 CLOSE #1 :: GOSUB 166 :: GOTO 124
135 CLOSE #1 :: END
136 CLOSE #1 :: CALL SCREEN(10):: DELETE "DSK"&WD$&". "&W$ ::
PRINT "DSK";WD$;"." ;W$;" DELETED":"by by _ ":W$;" GOING
FOREVER "
137 PRINT "or ":"USE DM1000 to RESTORE IT."
138 FOR TY=1 TO 555 :: NEXT TY :: CALL CLEAR :: GOTO 120
139 CLOSE #1
140 CALL CLEAR
141 CALL SCREEN(4)
142 DIM TYPE$(5)
143 TYPE$(1)="d/f"
144 TYPE$(2)="d/v"
145 TYPE$(3)="i/f"
146 TYPE$(4)="i/v"
147 TYPE$(5)="Program"
148 INPUT "What drive(STR$(I))":I
149 CALL SCREEN(12)
150 OPEN #1:"DSK"&STR$(I)&".",INPUT ,RELATIVE,INTERNAL
151 INPUT #1:A$,J,J,K
152 DISPLAY " =";A$:"A=";K;" U =";J-K
153 INPUT #1:A$,I,J,K
154 CALL KEY(5,F,G):: IF G=-1 THEN 154
155 IF LEN(A$)=0 THEN 163
156 DISPLAY :A$;TAB(12);J;TAB(17);TYPE$(ABS(I));
157 IF ABS(I)=5 THEN 160
158 B$=" "&STR$(K)
159 DISPLAY SEG$(B$,LEN(B$)-2,3);
160 IF I>0 THEN 153
161 DISPLAY TAB(28);"y";
162 GOTO 153
163 CLOSE #1
164 GOSUB 166
165 GOTO 120
166 PRINT " HOLDING ":"press a key to go on " :: CALL
SCREEN(7)
167 CALL KEY(5,K,S)
168 IF S=0 THEN 167
169 RETURN
170 CLOSE #1
171 CALL CLEAR :: D=0
172 DISPLAY AT(8,1)SIZE(17):"MASTER DISK (1-6)" :: DISPLAY
AT(10,1)SIZE(2):">1" :: ACCEPT
AT(10,2)SIZE(-1)VALIDATE("123456"):D$
173 DISPLAY AT(14,1)SIZE(13)BEEP:"OUTPUT DEVICE" :: DISPLAY
AT(16,1)SIZE(9):">1 SCREEN" :: DISPLAY AT(18,1)SIZE(10):">2
PRINTER"
174 DISPLAY AT(22,1)SIZE(18):"CHOOSE YOUR OPTION" :: DISPLAY

```

```

AT(24,1)SIZE(2):">2 " :: ACCEPT
AT(24,2)SIZE(-1)VALIDATE("12"):O$ :: IF O$="1" THEN 176 :: IF
O$="2" THEN 175
175 OPEN #2:"PIO",OUTPUT :: D=2
176 T$(1)="DIS/FIX" :: T$(2)="DIS/VAR" :: T$(3)="INT/FIX" ::
T$(4)="INT/VAR" :: T$(5)="PROGRAM"
177 OPEN #1:"DSK"&D$&".",INPUT ,RELATIVE,INTERNAL :: INPUT
#1:A$,J,J,K
178 PRINT "DSK"&D$&" - DISKNAME = ";A$:"AVAILABLE =";K;" USED
=";J-K
179 PRINT #D:"DSK"&D$&" - DISKNAME = ";A$:"AVAILABLE =";K;"
USED =";J-K
180 PRINT #D:"FILENAME SIZE TYPE P":"-----"
-----"
181 FOR LOOP=1 TO 127
182 INPUT #1:A$,A,J,K :: IF LEN(A$)=0 THEN 195
183 PRINT #D:A$;TAB(12);J;TAB(17);T$(ABS(A));
184 IF ABS(A)=5 THEN 198
185 B$=" "&STR$(K)
186 PRINT #D:SEG$(B$,LEN(B$)-2,3);
187 IF A>0 THEN 190
188 PRINT #D:TAB(28);"Y":
189 GOTO 191
190 PRINT #D:TAB(28);"n":
191 NEXT LOOP
192 RETURN
193 CALL KEY(5,K,S):: IF S<>1 THEN 193
194 RETURN
195 CLOSE #1 :: IF D=2 THEN CLOSE #2
196 PRINT : : "PRESS ANY KEY":" H O L D I N G "
197 CALL KEY(0,K,S):: IF S=0 THEN 197 :: IF K<>0 THEN 120
198 REM PRINT #D:""
199 GOTO 187
200 CALL CLEAR
201 OPEN #9:"PIO",OUTPUT
202 INPUT "FILE NAME ":N$
203 OPEN #8:"DSK1."&N$,INPUT
204 LINPUT #8:NZ$
205 IF EOF(8)THEN 212
206 PRINT #9:NZ$
207 PRINT NZ$
208 CALL KEY(0,K,S)
209 IF K=90 THEN 212
210 IF S=-1 THEN 208
211 GOTO 204
212 CLOSE #9 :: CLOSE #8 :: GOTO 119
213 INPUT "WHAT DRIVE (mi) ?":V$
214 CALL CLEAR :: OPEN
#1:"DSK"&V$&".",RELATIVE,INTERNAL,INPUT ,FIXED :: INPUT
1:B$,B,C
215 DISPLAY AT(21,8):" ";B$ :: D=8 :: E,F=1 :: Z$=""
216 INPUT #1:C$,G,B,C :: IF LEN(C$)=0 THEN 220
217 CALL KEY(0,K,S):: IF S=-1 THEN 217 :: IF K=32 THEN 220
218 DISPLAY AT(D,E):USING "## #####":Z$,C$ :: IF E=16

```

```

THEN E=1 :: D=D+1 ELS E E=16
219 F=F+1 :: GOTO 216
220 INPUT "W$= MIRROR IMAGE file ":"W$
221 REM THE NEXT 12 LINES MUST BE MERGED-IN. TYPING IN
BARRY'S E/A Opt #5 LOADER JUST WON'T WORK. (hidden e/a
stuff)
222 !*****!
223 !
224 ! E/A OPTION #5 LOADER !
225 !
226 ! By Barry Boone !
227 ! Version 2.0 !
228 ! (C) 1985 !
229 !
230 !*****!
231 C$="DSK"&V$&". "&W$
232 CALL INIT :: CALL LOAD(8196,252,0)
233 CALL LINK("OPT5",C$)
234 GOTO 100
235 R=0
236 REM
237 IMAGE ##
238 INPUT "WHAT DRIVE ?":D$
239 D$="DSK"&D$&". " :: OPEN #1:D$,INPUT,RELATIVE,INTERNAL ::
INPUT #1:N$,A,A,A :: DISPLAY AT(1,10)ERASE ALL:SEG$(D$,1,3)&"
"&N$;:: I=0
240 FOR X=1 TO 40 :: IF X=20 THEN 247 :: IF I>127 THEN K=X ::
GOTO 251
241 INPUT #1:P$,A,B,B
242 CALL KEY(O,F,G):: IF F=90 THEN 247 :: IF G=-1 THEN 242
243 IF LEN(P$)=0 THEN 248
244 REM IF ABS(A)<>5 THEN 1510
245 DISPLAY AT(X+2,10):USING 237:X :: DISPLAY AT(X+2,14):P$
:: PG$(X)=P$
246 NEXT X
247 DISPLAY AT(X+2,10):USING 237:X :: DISPLAY
AT(X+2,14):"NEXT SCREEN" :: DISPLA Y AT(X+3,2):"CHOICE? 20"
:: GOTO 249
248 DISPLAY AT(X+2,10):USING 237:X :: DISPLAY
AT(X+2,14):"TERMINATE" :: DISPLAY AT(X+3,2):"CHOICE? 1"
249 ACCEPT AT(X+3,10)SIZE(-2)VALIDATE(DIGIT):K
250 IF K=20 AND X=20 THEN 246
251 IF K=X THEN CALL CLEAR :: CLOSE #1 :: END
252 PRINT "name = ";PG$(K):: IF K<1 OR K>41 OR LEN(PG$(K))=0
THEN 248
253 CLOSE #1
254 CALL INIT :: CALL PEEK(-31952,A,B):: CALL
PEEK(A6+B-65534,A,B):: C=A6+ B-65534 :: A$=D$&PG$(K):: CALL
LOAD(C,LEN(A$))
255 FOR I=1 TO LEN(A$):: CALL LOAD(C+I,ASC(SEG$(A$,I,1)))::
NEXT I :: CALL LOAD(C+I,0)
256 RUN "DSKX.1234567890"

REM ! MIGHT LIKE TO SEE SOME DOCS ?

```

I'll give a try. First part line # 100 to line #256 .
: is a memory reader. HELL, TYPE IT IN . TRY IT ! PLAY WITH
IT ! CHANGE IT ! FIND OUT WHAT IT CAN DO . You might be
suprised, I sure as hell was. I through it together from
other stuff I had wasting around .
YOU NEED THE PRACTICE TYPING ANYHOW !

Tony Zlotorzynski 046

FOR SALE:

\$25 each -- 2 TI 99/4a Computer Consoles.
\$150 -- Myarc Mini-Peripheral Expansion Systems w/32K mem,
serial and parallel ports.
\$75 each -- 2 SSDD disk drives.
\$125 -- TI Expansion Box W/RS232C Card.
\$75 -- TI 99/4 Impact Printer.
\$15 -- TI Cassette Recorder w/cable.
\$5 -- Joysticks.
\$50 -- Cartridge Case w/TI-W, E/A, Mini Mem, DM 2, 2 XB, and
five game cartridges.
\$50 -- TI-Count General Leger Software (diskettes).
\$5 each -- In-house software: Misimation (Basic)
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Or total package for \$500.00 (we pay the shipping cost).
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The Pascal Advantage By Mike Maksimik

Hi there all of you Pascal fans! I'm back again with
another article giving you tricks and tips on U.C.S.D.
Pascal version IV.0. It's been a few months since my last
article, but that way I can pack this one with a lot of
information.

Some of you may own the MYARC disk controller. If so,
and if you have 80 track drives installed (like me), you may
know that you can get a maximum of 720k per disk. That means
total 160 tracks, with 18 sectors per track at 256 bytes per
sector. The p-system communicates with the disk drives using
an XMLLNK-like device driver. The initial information it
gets about each drive is first read when the system is turned
on and each drive is read. Well, for 80-track drives, this
information is initially meaningless, and the p-system
assumes an 80-track drive in either position (1,2,3) to be
40-track. So I wrote an addition to my SYSTEM.STARTUP file.
It does a UNITREAD of the first 256 bytes of my 80-track
drive. From then on, the p-system is forced to recognize
that drive as a 720k drive. I also modified my date/time
routine, so it displays the current date and time, plus I put

the current year in my clock card, so I retrieve that also. In addition, I define the current printer and remote devices. For those of you coming to the FAIRE, I will be there, so please DON'T send me mailers for these programs, as they usually tend to get lost!

Another reminder, for those of you in other groups--I give my permission to reprint this article for any use.

Next, I want to discuss some more EXTERNAL routine access. Any external routine written in assembly language can access variables from the pascal program in two ways--through the parameter list, and by using the .PUBLIC directive in your assembly program. First, the assembler manual is a bit vague in explaining how the different data types are passed to and from an assembly language program. First, we start with the header:

```
Procedure CLOCK(Var Hour,Minute,Second:integer); EXTERNAL;
```

Here we are passing the ADDRESSES of variables hour, minute, and second on the user/system stack to the assembly program. In the assembly program, we use R10 to get them, since R10 is the stack pointer:

```
.PROC CLOCK,3 ;3 word size parameters passed to

HOUR      .EQU 5608H ;ADDRESSES of the time
MINUTE    .EQU 5606H
SECOND    .EQU 5604H
MOV *R10+,R2 ;GET POINTER TO SECOND
MOV *R10+,R3 ;GET POINTER TO MINUTE
MOV *R10+,R4 ;GET POINTER TO HOUR
MOVB@HOUR,*R4 ;NOW GET THE HOUR FROM THE CARD AND
SWPB *R4 ;GIVE IT TO PASCAL&MAKE IT A BYTE VALUE
ANDI *R4,00FFH ;CLEAR THE UPPER BYTE
MOVB@MINUTE,*R3
SWPB *R3
ANDI *R3,00FFH
MOVB@SECOND,*R2
SWPB *R2
ANDI *R2,00FFH
B *R11 ;NOW RETURN TO PASCAL.
```

Remember, when passing 3 words on the stack, three words MUST be removed. In the case of VALUE parameters, which I don't recommend, the three values would have to be placed back on stack, not their addresses. Value parameters are the second type, and by omitting the VAR statement in the parameter list, the values are passed and retrieved by pascal. This requires more stack manipulation, plus with strings, value parameter passing requires getting a segment environment record, searching that segment for the string, and so on. Use VARIABLE parameters instead. Much safer and nicer! Be careful to NOT change the addresses, it would only be

disaster for you, not the p-system, because it's only passing a COPY of the address of the variable, so you couldn't relocate the variable if you tried. Well, that's the way they work. Variables of type CHAR are passed by address, as well as arrays. Arrays are passed by the address of the first element. For n-dimensional arrays, you have to calculate the address of the cell you want, by using the dimensional information passed to you with VALUE parameters, or by hard coding the calculation into the program (which is dumb). For example, suppose you wanted to pass the element in this array:

```
Q(1,5,76,8)
```

where Q is a 4-dimensional array of INTEGER. You will get the address of that cell. On the other hand, if you passed the assembly routine this:

```
Q(,,,)
```

which is just the name of the array, you will get the address of the beginning of Q, and so, to get element Q(1,5,76,8) you will have to calculate it for yourself.

Strings are handled nicely with VARIABLE parameter method, or by using .PUBLIC directive. You are passed on the stack a pointer to the string. The first byte is the length of the string. The next byte is the first character of the string and so on. To pass a string to pascal, first get the address passed to you by pascal using R10. Then place the length of the string at that address, followed by the string itself:

```
.PROC STRTST,1 ;ONE POINTER PASSED TO ME
JMP AROUND ;NOW SKIP THE DATA SECTIONS!
STRING      .ASCII "THIS IS A STRING."
LENGTH     .BYTE 17
AROUND      MOV *R10+,R1 ;R1 IS ADDRESS OF STRING
            MOVB@LENGTH,*R1+ ;GIVE R1 THE LENGTH OF THE
                        STRING
            MOVB@LENGTH,R2 ;NOW SET UP A CHARACTER COUNTER
LOOP        MOVB@STRING,*R1+ ;GET A CHARACTER FROM STRING
            DEC R2 ;DECREMENT THE COUNTER
            JNE LOOP ;IS THERE ANOTHER CHARACTER LEFT?
            B *R11 ;NO, SO RETURN.
```

Another way of doing it would be to use the .PUBLIC directive. Do it this way:

```
.PROC STRTST,0 ;NO POINTER PASSED BY THE STACK

.PUBLIC D
```

and then we continue, using D where we would use the *R10+. D is, in fact, the name of the string, or any variable, for

that matter, which appears in the Pascal VAR declaration at the beginning of the program:

```
PROGRAM STRINGTEST(INPUT,OUTPUT);
```

```
VAR D:STRING[80]; (*LENGTH CAN BE 80 OR ANY LENGTH LESS THAN  
256*)
```

So now, we have two methods. The stack method, using *R10+ to get a pointer is good for a library of BLACK BOX routines, and the .PUBLIC method of getting a pointer is good for a one-time simple routine you won't want anyone else to guess what you are doing in a program. I think .PUBLIC is good for the protectionist, but the stack method works equally well. For a lot of parameters passing, use .PUBLIC to gain a little speed. Plus, with .PROC, you don't have to worry about blowing up the stack! But, then again, your program becomes less readable, and several years down the line when you are looking at a piece of confusing code, you'll remember my words!

Again, you DON'T push anything on the stack, except when using VALUE parameters, and to return a function value. The function value is a FUNCTION declaration must be the last VALUE passed on the stack. Note, that only word quantities can be passed back with a function return value, but you may access any VARIABLE parameters passed to the assembly routine to make further "hidden" data modifications, as in procedure parameters. I hope this makes it clear, I had to experiment to get it right!

Here's another topic which concerns us--interrupts. The p-system does not allow interrupts, in a hardware sense, but does it by the software method instead. Certain flags are kept in the background of the system, which is a set of concurrent routines. These flags, along with the concurrent routines, scan the keyboard, check for sprite motion, sound control, cassette timing, in fact, all of the things the routine at >0900 in the console does when an interrupt happens. So what about the VDP timer and the peripherals, such as the 80 column card by DIJIT and the RS232? Well, those are normally disabled by an initial LIM1 0 instruction, and so they won't work. And the user interrupt routine won't work either. So we have to devise other methods. Since the p-system is a set of 13 or so concurrently running processes controlled by the KERNAL, our program can have some of its own. For example, we can set up a PROCESS to scan the RS232 card for a character, repeatedly. The same applies for the keyboard, and any other device or process we want (up to 255), and then assign a priority ratio of CPU time each gets, and then set each into operation. If a process wanted to use the screen and not have interference from other PROCESSES, it

can do this, and any other process that tried would be stopped temporarily. Now, a process can put itself in a wait state, for example, if there were 10 processes which needed to use the screen, each would make a call to the WAIT procedure, and then the main program could SIGNAL each PROCESS to continue. The processes are placed in a ready queue, and there are they ordered according to proportion of processor time. So if all ten processes were waiting, the one with the highest priority would get the screen first, then the next, and so on. By using SIGNAL and WAIT, software interrupts are easy to program. The p-system kernel is similar to a mainframe kernel which handles many terminals and memory storage devices in this manner. Few devices are tying up the main processor with hardware interrupts. With the ti99/4a, we can't allow interrupts, because the interrupt handler in the console would turn off the p-code card and not remember to turn it back on again. So LIM1 2 is a no-no, unless you don't plan on returning back to the p-system where you left off. You could use the powerup routine to activate your program, and then turn off the p-code card. But that's a waste! You can build a DSR card which can load a file from disk called EXECUTE and it executes it on powerup! But do what you want.

The p-code card DOES contain GROM chips, but they are used to store the system, not to execute GPL. Perhaps that's the only good use for a GROM, as a fast read-only device, requiring less time (and space) than a ROM. Well, it was a good place to put the system routines, as they can be loaded in chunk by chunk into the 32k card or VDP chip to be executed, and then overwritten by still more chunks of code. There's about 40k of code in the p-code card, but only pieces of it need to be executed at one time. The best way to store it isn't on a disk (slow) but in memory chips.

If you are using a MYARC controller and using DS/DD drives with the p-system, make the interlace 5, not 4, you will find that the p-system LOVES 5.

Also, if you have ever noticed a whole disk get ruined by having text files overlap code files, etc. If you have, then STOP! Don't save anything else to that disk! You will have to remember the directory, print it up, along with the block location information using the Filer, and then zero the disk. Then, use the RECOVER utility to get the files back. I used interlace 4 for some time, but found out that the disk errors varied from location to location. If you are experiencing these errors, change your interlace! In some instances, rebooting the system will help things out. But I found out that a program out there called CHECK can be disastrous! It only does a UNITREAD, but when you do a UNITREAD, the system no longer knows where the read/write head is and assumes it to be at sector 1 on the disk. When you run this program, the read/write heads are set to sector 2, which is what confuses the system. So if you plan on

executing some UNITREADS or UNITWRITES, be very careful, and after the program is run, you will find the system no longer can recognize the volume you read/wrote to. So you will have to either reboot the system, do a UNITCLEAR for that drive, or do a Volumes command from the filer. No other method will restore that drive. I, of course, have written a nice program which restores all drives to their powerup states, and I call it DSKRESET. It works, and it only does UNITCLEAR's to the drives. Note that any access beyond the first sector does not affect the system, so say no to sector 0 and 1, unless you really have to, and read beyond them to the next track or so, so the next time when the system access the drive, the head will reset and it can start fresh.

Well, It's time to go for now. But as a favor to all of you p-system users, here's some GOOD information:



Let me take this opportunity to thank everyone who helped make this months newsletter possible. This is the first time I've ever tried to do something like this. The support was really there. I want to thank Carole Goldstein for her fabulous help. She gave me her art work and layouts from previous months. Besides that, she was there on the phone when I needed her. She even insisted I take her work phone down so I could reach her there if needed. Carole, you've been the Editor here for 6+ years. I know I speak for the group when I say, "Thanks for all your efforts. Thanks for giving Chicago TI User Group a newsletter they can be proud of. Thanks for making the Chicago Times an original. Thanks for giving so much to the group. Your efforts as editor will be missed."

I would also like to thank Grant for his help and suggestions. His insight in the business has been very helpful. I want to thank Nick Iacovelli for his donation of art works and fonts. These have been very helpful in getting this newsletter out.

Last but not least, I'd like to thank all the contributing authors. Your articles have over whelmed me. Some of you even wrote more than 1 article. I used all the ones I could. The rest will be published next month. Thank you every one for Caring and Sharing. May God bless.

Bob.

GENEVE SUPPORT ARTICLE

Howdy Doody there, sports fans!!! It sure is great to be back after the summer vacations, with plenty of fun in the sun! Also, if you will remember, my last article was fairly short, compared to what you are used to getting from me. I hope to make that up in this and in future articles.

If you will remember, in my last article, I gave a birthday greeting to our dear friend and co-worker, Geneve. Once again, "Happy Birthday, Genny Baby! After one year, you sure are lookin' fine!" And that's very true. Genny is doing very well, after her first year on the block. There are all sorts of new things emerging for her (and her sister, our beloved 4A), in both hardware and software. In fact, every day that I see something new come out for her, the happier that I become that I chose to go in this direction. Let's start by talking about some of the most important things that have emerged for Genny:

By now, everyone has been made aware that Myarc's new Hard/Floppy Disk Controller card has ceased to be "vapour ware." It has come out in great style, and best of all, IT REALLY WORKS! Yes, sports fans, this sexy, new baby really does every thing that it is supposed to do, and more. It is probably the best thing that has emerged for the TI community, since the emergence of the Horizon RAM disk. Those local members of our club, who were able to attend our last meeting, received a very pleasant treat; we were given a great demonstration, of this new peripheral, by Mr. John Birdwell, a truly great and innovative programmer in the TI community. You may remember that in some of my previous articles, I have complimented John on his work, especially in his fine "fair ware" program, Disk Utilities. Well, it seems that he has come to the attention of the top heads at Myarc, and he was contracted to write the software for the new Myarc HF/DC. When I heard of this, I must admit, it really made my day! Being familiar with Dr. John's work, knowing the intelligence and integrity with which he works, and having had the pleasure to meet him at the last Chicago Faire, I knew that this new peripheral would be no ugly duckling; rather, it would be a swan that would really fly the very first time. (BTW, "Dr. John" is the respectful appellation that I have given John, on Hank Ellermann's fine bbs, The Chicago Connection [(312)453-7831]. Dr. John is a fairly frequent user of this bbs, and his identification number is #15.) And it appears that my optimism was well placed. This new peripheral will control up to three hard drives, each with a maximum of 360 megs! It will also control up to four 720K (QUAD density-2880 sectors) floppy disk drives! (Double density drives, with 1440 sectors, are also supported.) Now, how does that sound? If you have a

regular SS/SD disk drive, and you replace it with a quad density drive, you are making an eight fold increase in your storage space, from 360 to sectors to a maximum of 2880 sectors. (Here, I again recommend the 3.5 inch drives, for quad. They are more reliable, they are quieter, they draw less current, and the medium is superior.) Another nice feature, of the new HF/DC is the fact that you can still continue to use another disk controller card in your P-box. With another controller card in your P-box, you can have up to EIGHT floppy disk drives operational! This means that you can continue to use your faithful, reliable, old TI DCC. You may wonder why anyone would want to keep their TI card in their P-box; the reason is that there are some programs that, in the past, would not run on a Myarc or CorComp disk controller card. By keeping your TI card, in your P-box, connected to a single external drive, you can still continue to run those early TI programs, if you are still using or need them. At the same time, I would urge you to look around at all of the new stuff that has emerged. You may find that more modern, enhanced, and up-to-date programs exist that do the same things that the older TI programs did and much more. In addition to all of the above, the HF/DC card also has provisions for a "streaming tape" back-up drive! Anyway, for the \$299.00 list price, of the new Myarc HF/DC, you really can't go wrong, and I defy anyone to find me an IBM peripheral that will do as much for the same amount of money. Incidentally, it will work with either a 4A or a Geneve. (BTW, who is the "clone clown" that called our TI a toy???)

Speaking of the new software, that has emerged for Genny, over the summer, we have seen the release of M-DOS, versions 1.06 and 1.08 (and GPL versions 1.01 and 1.02). These new versions of DOS have each been improvements over the earlier versions of M-DOS, and each has, successively, included more of the commands that can be found in the Geneve owner's manual. With the latest version of DOS, though a hard drive can be used, all work with it must be done in the GPL mode. With version 1.10, which should be coming out very soon, a hard drive user will be able to do all hard drive operations from M-DOS and even boot his/her SYSTEM/SYS, AUTOEXEC, and batch files from a hard drive. Here, I would like to talk about few of the additions and changes that can be now found in DOS, versions 1.06 and 1.08:

a.) The Print Screen feature will now work. By pressing the key combination CTRL-PRINT SCREEN, Geneve will dump any commands, which you may type in, to your printer. Also, used in conjunction with the TYPE command, you can print out a text file in DOS. In addition to this command, try SHIFT-PRINT SCREEN. This command should dump, to your printer, the contents of a single screen.

b.) You will no longer have 720 sectors available on your built-in RAM disk; instead, there are now 478 sectors

available. This is because of a necessary re-allocation of memory. The extra memory now allows Genny to go into a true "multi-tasking" mode. By this, I mean that you can now load files onto your built-in RAM disk, and the contents will NOT be lost when you move from M-DOS to the GPL mode. This means that you can load files, onto the built-in RAM disk, and then use them in the GPL mode and vice-versa. This means that I can save this article to my built-in RAM disk, quit MY-Word, do a SHIFT-SHIFT-CTRL, then a CTRL-ALT-DEL, and return to M-DOS. I can now enter the TYPE command and read the contents of my article from the built-in RAM disk. Using the CTRL-PRINT SCREEN command, I can print it out, without having to use the formatter in MY-Word. Also, while I am in M-DOS, I can load up MY-Art, do some work there, and save it to the built-in RAM disk. I can then quit MY-Art, and return to the GPL mode. There, I can re-load MY-Word, and my article will still be stored safely on my built-in RAM disk. I can then reload it into the program and easily continue my work. Nice??? You bet it is!

c.) There is now an additional command that can be used while in M-DOS, and I have added it to one of my batch files, that is called from my AUTOEXEC file: F:GPL DSK6.EA. (The last period is a punctuation mark for the sentence, in this article, and should not be included in your command.) This command will load my GPL mode files from drive "F" (which is my 256K Horizon RAM disk, which is emulating DSK6). It will then automatically load, from DSK6, the cartridge program EA (Editor Assembler). (Please notice that I do not use the old name, E/A. This is because, just as with MS-DOS, M-DOS does not like file names that have a slash "/" in them.) Also, don't forget, you can create your own "cartridge" which you can load into the TI (GPL) mode. In case you have forgotten, here is the procedure, with a few suggested files: 1.) Boot your machine and go into M-DOS. From there, go into GPL. 2.) Load into the GPL cartridge space the file E/A (which must be re-named, beforehand, to EA). 3.) Also, load, into that same space, Jim Schroeder's modified version of John Johnson's "Menu" program. 4.) Now, load, into that same space, a cartridge loader for MY-Word. 5.) Now, press enter. You will see a menu screen with the titles of each of the above mentioned (loaded) files. Go into Editor Assembler option 5. From here, load the file CSAVE. It will then ask for a name, with a drive designation. You can use any standard name. For example, you could call it "DSK1.CART," or even "DSK1.J." 6.) Put a freshly initialized disk into disk drive #1. Enter the name, which you have chosen, and press ENTER. CSAVE will then save out to disk drive #1, a program in Geneve cartridge format, named "CART," or whatever name you have chosen, which can be loaded into the GPL cartridge space. It can later be copied to other disks, including your hard drive, Horizon RAM disk, or even your built-in RAM disk, when you boot your system and your SYSTEM/SYS. (Here, I would again like to emphasize that

even though I am the owner of a 20 meg. hard drive, I am still committed to the use of my Horizon RAM disk. The reason is simple: Hard drives are mechanical devices that can and will crash, as a result of eventual wear and tear. In the case of a RAM disk, such as the Horizon, there is NO mechanical wear; all files are in RAM. Though, one day, they too may wear out, it is clear that being electronic devices, using low currents and voltages, they will last a heck of a lot longer than ANY hard drive. For this reason, I will continue to use my trusty 256K HRD, until I can afford a Phoenix. This is a HRD with an additional chip on it, which creates an additional 90K, 180K, or 256K "boot drive" that Geneve will see only upon booting up. It is a great space for your SYSTEM/SYS and your AUTOEXEC files. You then have a full meg. of space in which to save your most important and most used files. Incidentally, it has been found that the earlier versions of Jim Schroeder's program RAM/DOS will not work on the newer versions of M-DOS, but Jim has already made revisions that will cause the program to work. They are available on many of the TI/9640 bbs's, including the TI sigs of Delphi, Genie, and CompuServe.)

d.) Version 1.20 of MY-Word has been released. This new version eliminates the bug that caused the program to crash when you had a directory page that had exactly 22 entries and you tried to "page down," to see if there is an additional page. It also has an additional utility called SetPathname. This utility can be invoked by entering the Command Mode. Enter the command SP. You will then be asked for, "The Complete Name of the Current Loader:" Here, you should enter the name of the program with a disk drive designation. In my case, since I am booting MY-Word from my Horizon RAM disk, I entered, "DSK6.MW". After you enter the above, you are then asked, "Pathname to load from:" Here you should enter the disk drive designation and end it with a period. In my case, I entered, "DSK6." After I invoked this utility, it saved the drive information out to the file named CONTROL, and whenever I load this program, it goes directly to drive #6, and no other drive is searched. As a result, MY-Word is able to be loaded even faster than before.

How is all of this for starters? I, personally, think that it is all pretty neat. Those of you who may have been waiting to see whether Geneve would fly can well see that she is totally airbourne. If you haven't given Genny a test flight, you really should consider doing it.

Well, sports fans, I don't want to go on too long. If I do, Big Bob may ending up punching old Krome Dome out, for using up too much space in his precious newsletter. There is so much more to discuss, so I will have to save it until next time. Also, as I am planning to attend the Seattle Fair, I hope to have some new things, for Genny, to report on. Therefore, until next month, it is time for me to mosey on

off into the setting sun, so from your friend, Krome Dome
Jonz,

enditenditenditenditenditenditenditenditenditenditendit

BITMAPS By Bob Demeter

Well, here we are with what may prove to be our 3rd and final article on sector editing. Before we get started, let me clarify something. Somehow, an entire paragraph came up missing in part 2. The explanation of the last example wasn't there. I'll do that sample sector again. Then we'll continue on.

```
5341 4D50 4C45 2020 2020 0000 0803 000A
0050 1E00 0000 0000 0000 0000 3090 0000
```

If we look at bytes >00 to >09, it will spell out the filename. 53414D504C45 is hex for SAMPLE. Because each filename can use 10 characters, the sector sets 10 bytes aside for it. Those characters not used are defined as spaces. Thus, bytes >06 to >09 (2020 2020) are spaces. Byte >0C reads 08. This is binary 0000 1000. We know from earlier info that this translates into Display/Fixed format. Bit 3 is on. So, the file is write protected. Byte >0D reads 03. This tells us we have 3 records in each sector. Bytes >0E and >0F read 000A. >0A you'll remember translates to decimal number 10. This Byte tells us how many sectors to the files. So, we have 10 sectors in the actual file. Remember, a catalog would show 11 sectors for this file. That's because it adds 1 for the File Directory Record. (Sectors >02 to >21).

Byte >10 is not used here. This is because we have a Display/Fixed file. Byte >10 is used by Program and D/V files only. Byte >11 reads 50. This is decimal 80. So, now we know we have a D/F 80 file. 1E is byte >12. This byte tells us the lower order number of records in the file. Hard to understand? OK, let's look at it this way. 1E is 30 in decimal. This byte says there are 30 records in this file. This can be proved or justified by simple math. Byte >0F says we have 10 sectors. Byte >0D says we have 3 records per sector. $10 \times 3 = 30$. Thus, 30 records for this file = >1E. Byte >13 reads 00. This is the higher order number of records in the file. It is not being used in our example. It will only be used if >12 reads beyond >FF. Bytes >14 to >1B are not used. Byte >1C is the location where the file starts. On our example, our file starts at sector >30. The 9 in 3090 is the Offset number. This tells us we start at >30 and continue on for the next 9 sectors.

Well, is everyone with me so far? It's a lot to consume. But, it gets easier after you've done a few. I see by article 2 I promised to due a lot of stuff this time. So, we better get started.

Sector info doesn't necessarily end with byte >1F. If a file has multiple fractures, sector info continues into the byte

>20 area. Before we get too involved, lets back step a little. Bytes >1C to >1F can get hairy. A disk formatted SS/SD has 360 sectors. This is >0168. It is feasible that a file can start above sector >FF. What do we do then? This is where much confusion can exist. Suppose sectors >1C to >1F read 00B1 0000. Where does the sector start? Sector 00? Of course not. We all know that >00 is the Bitmap. When we read these 4 bytes, we need to do some leap frogging. Part of Byte >1D belongs to starting sector info. The other part belongs to offset info. The least significant bit (1) belongs to sector info. The most significant bit (0) belongs to offset info. But, just where do these numbers fit in? When we look for Starting Sector info, we read LSB >1D first. Then we read >1C. Using this info, you'll see that our sector starts at >100. When we want Offset info, read >1E first. Then MSB of >1D. Now you'll see our Offset is 008. If we look at the previous example, Bytes >1C to >1F read 3090 0000. Starting Sector is >030 or >30. Offset is >009 or 9.

Look over our File Directory Record sector. Do you notice any relationship between some of the bytes? For one, we prove Byte >0F times >0D = Byte >12. Look at the bytes that make up the Offset info (>1D >1E). Did you notice that >009 is 1 less then Byte >0F (>0A)? If we start at >30 and offset by 9, we have 10 sectors. Byte >0F says we have 10 sectors too. Pretty neat, Hah? Let's see what happens when a file becomes fractured.

Example: 5341 4D50 4C45 2020 2020 0000 0803 000A
0050 1E00 0000 0000 0000 0000 3040 0040
4000 0000 0000 0000 0000 0000 0000 0000

Most of it looks familiar, right? Filename- SAMPLE. Protected D/F 80 file. 10 sectors long. Everything is the same except Bytes >1C and on. Where did Byte >20 come from? This one is quite simple. I bet most of you have figured it out already. Wait till you see one that has 8 or so fractures. When I ran my BBS I used to repair my bad message base files. Some of them became fractured in 6 or 7 places. Not much fun on a hard drive. Anyway, back to the article. Let's take a look. 3040 tells me the file starts at >030. Byte >1E reads >00. So we know the Offset is >004. Byte >1F reads >40. What does that mean? Well, we have to look at >20 and >21 first. Bytes >20 >21 are to >1F what >1D >1E are to >1C. Again we use the leap frog with the LSB and MSB. Looking at >1F to >21 we see 40 40 00. Start sector is >040. Offset is >004. As you can see, we have a file fractured in 2 places. Each section is 5 sectors long (>30 plus 4 =5 sectors, >40 plus 4 =5 sectors). Our files exist in sectors >30 to >34 and >40 to >44.

Just to help understand a little better, we'll do one with more fractures. After a while, you'll see they can be fun. Of course you know the best way to keep away from fractured files is to file copy to fresh disks often. If you have a

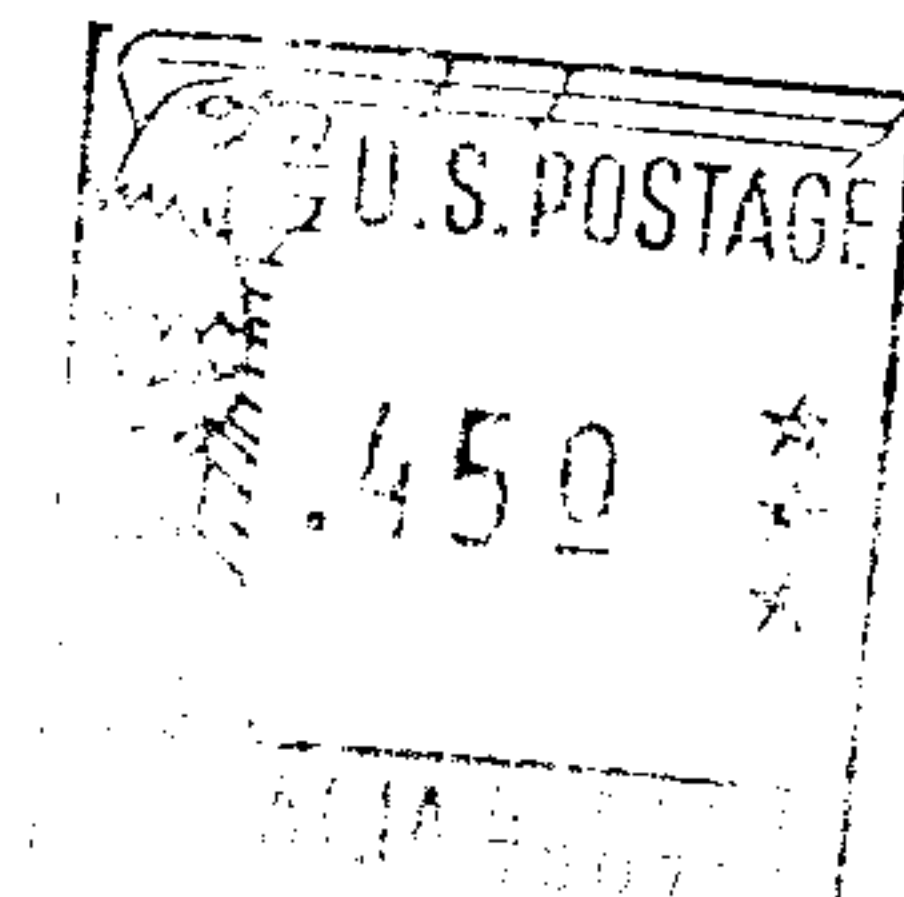
disk you add and delete a lot of programs on, you'll end up with a lot of fractures. We'll use our SAMPLE file again.

5341 4D50 4C45 2020 2020 0000 0803 000A
0050 1E00 0000 0000 0000 0000 3020 0040
3000 0021 0000 0000 0000 0000 0000 0000

Did I stump anyone? Of course not. We were smart enough to keep out TI's. We're smart enough to figure that example out. Let's go thru it just to make sure. All info about the file has stayed the same. It's just fractured more. We have 3 fractures. Our file occupies 10 sectors, >30 to >32, >40 to >43 and >100 to >102. Everyone got that, right? Bytes >22 to >24 read 00 21 00. Leaping over, we get 100 and 002. Tell you what, I've got 3.5 hand written pages here. I write small. My hand writing almost equals type written. Matter of fact, I just counted 69 characters per line and 28 lines per page. That should equal almost 3 type written pages. What say we cut it here and go for part 4? I spent a lot of time on fractured files. It's very simple to unfracture a file. Just copy it to a fresh disk. But, this can't always be done. I felt it was important to learn this part. Numerous fractures can get very confusing. But, with some patience and experience, you can figure it out. If your File Directory Record sector goes bad, you won't be able to copy the fractured file to another disk. You'll need to know how to read fractures in order to repair the FDR's. Till next time, KEEP HACKIN'!!!

=====

Chicago TI User's Group First Class Mail
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Community News...

As a public service, I have set this section aside for announcements that affect the community. This section will only be here as space permits.

Chicago Area BBS's that support the TI. These boards are also run by our members.

The Chicago Connection.312 453-7831.. Hank Ellermann, SysOp

The Chicago TI South...312 651-7252.. James Brooks, SysOp

TI-West.....312 345-4127.. Nick Iacovelli, SysOp

TI-Westdale.....312 455-3256.. Allen Izzo, SysOp

Attention IBM Users!

New User Group starting in the Schamburg area. Contact former TI-SysOp and librarian Larry McMahon, at 397-7031. Saturdays 10:00 am to 10:00 pm.